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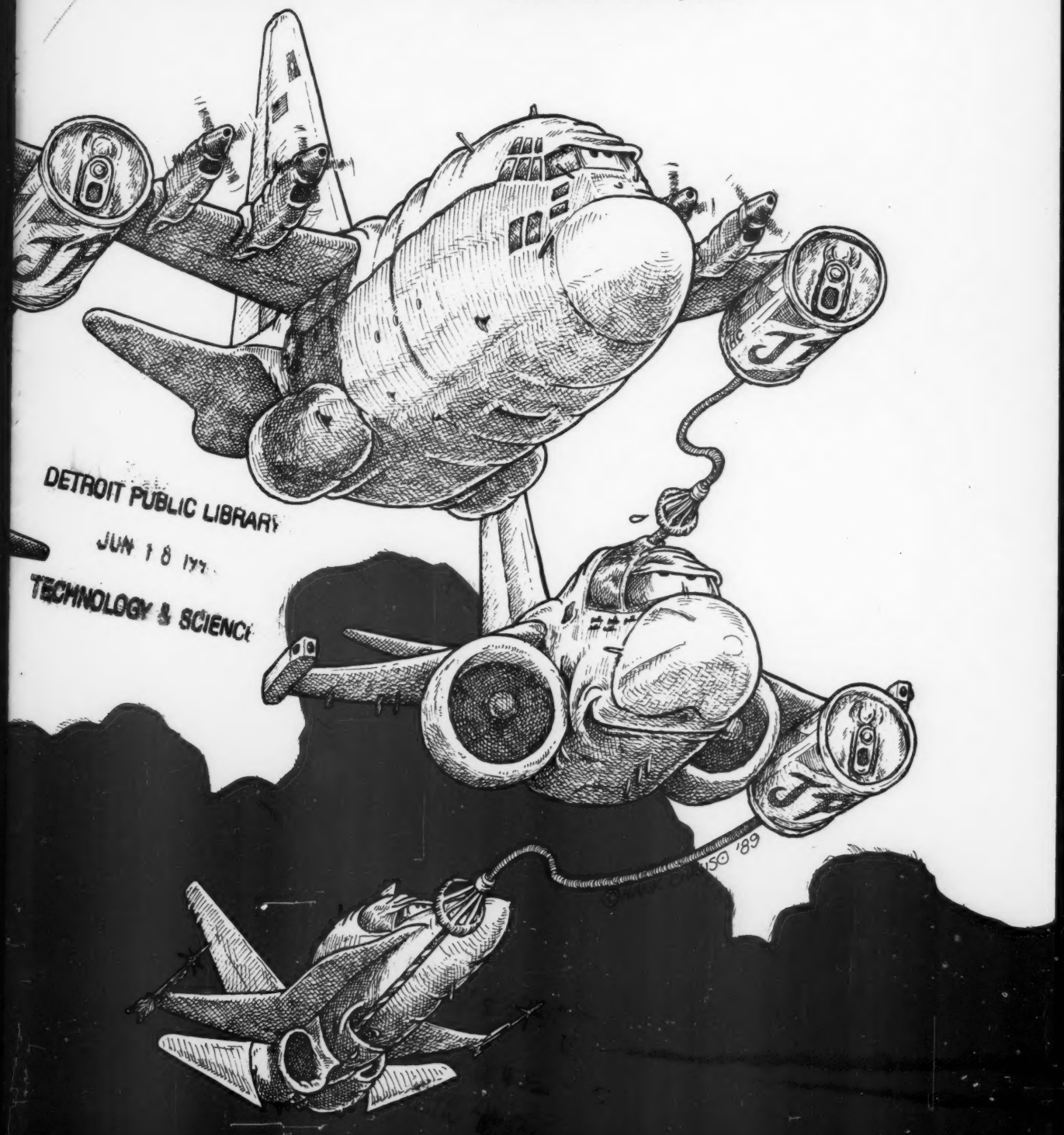
February 1990

approach

The Naval Aviation Safety Review



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February Editorial

February – the Dark Ages. The Super Bowl is over and Spring seems a long way off. The days are getting longer, but the sun still sets before you finish the afternoon ORP. The post-holiday safety standdowns are just a memory now. In February, a port call to Cannes might as well be to Naples; Jacksonville and Alameda might as well be Whidbey or Brunswick. The storms roll through more frequently, causing entire coasts to close for days. The swells grow. The decks move.

Lt. K. Campbell

The stage is set for trouble – low fuel trouble. Weather is only one of many elements leading to a potential bingo profile or long-range divert. This issue proves that even on the nicest days, it only takes one fuel leak, sour tanker or fouled runway to contribute to a bona fide emergency.

CWO4 Joseph Cox, USMCR

Speaking of contributors, the 1989 Approach Magazine Writing Award winners are listed on page 32. This was the third year for the awards, and this year we've reduced the categories from fifteen to three.

VA-95 won the Command Writing Award for the second year in a row, hands down. The "Green Lizard" strategy has been much different from a one-shot, nobody-leaves-the-ready-room-until-everyone-writes-a-story method. They provided a steady stream of quality inputs throughout the year, one or two at a time, that resulted in an unprecedented number of 10 squadron authors reaching the printed pages of Approach in 1989. We wholeheartedly endorse this type of writing program and thank VA-95 for their efforts. ◄

Congratulations! Lizards continue to dominate – well done!
Ex-Lizard One, Capt. Ken Craig, Director, Aviation Safety Programs

approach

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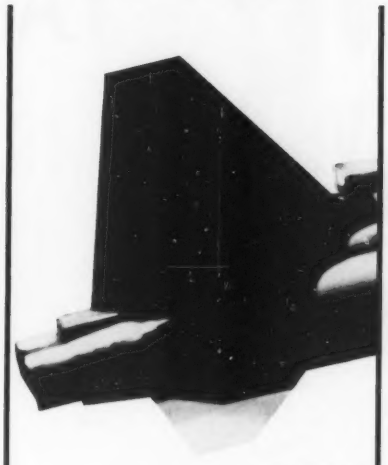

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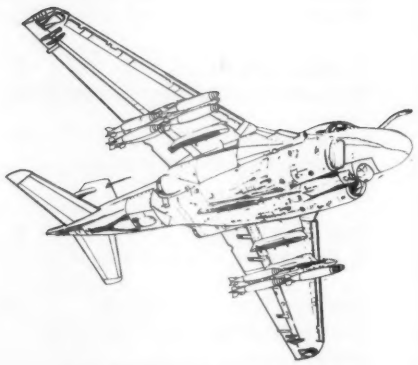
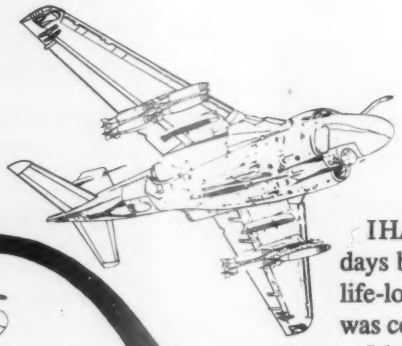
Heck, I Always Wanted





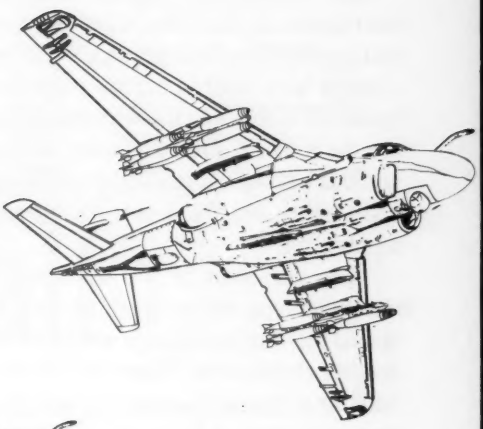
I HAD assumed command of the squadron only eight days before. I was proud at having accomplished this life-long goal. The day was bright and sunny, and the air was cool and clean. I was on top of the world.

I had six A-6Es to work with. At this part of the training cycle, our mission was a coordinated long-range strike against the B-17 target complex at Fallon. The plan called for 12 Intruders – six from our squadron and six from our sister squadron – and 12 F-14s from our two fighter squadrons to launch from Oceana. We would meet two USAF KC-10s, refuel in flight, and hit the target before landing at Fallon. The weather along the route was beautiful and the divert field was CAVU. The guarantee of KC-10s was icing on the cake.

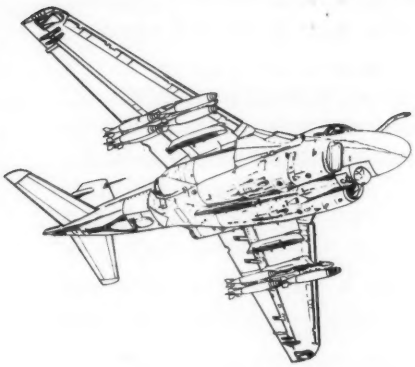
As I sat in the hold-short area, I looked at the 24 aircraft around me and thought, "Wow, it is really great to be part of this."

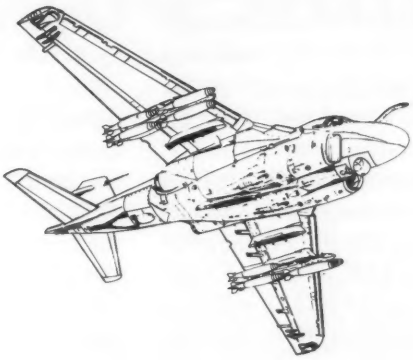
We launched and headed toward the rendezvous with our tankers. After 90 minutes, we approached the refueling track and made contact with the KC-10s. The F-14s headed for the tanker at FL 220, while we approached the KC-10 at FL 200. Our approach speed was

d to See the St. Louis Arch, Anyway



By Cdr. J.A. Bolcar





280-290 knots. We let the most fuel-critical aircraft tank first. His closure was slower than we had anticipated, and the tanker pilot confirmed that he was at 270 knots instead of the 250 knots we had thought.

I wondered if the KC-10 had the same reel-response limitations for speed changes that the KA-6D has, but I didn't ask. Up to this point, everything had gone smoothly. In fact, I was bored with the prospect of another three hours of droning along until the short low-level portion of the flight.

The pilot of the first aircraft to tank was a nugget, fresh out of the FRS. He made a nice, smooth approach. From my vantage point on the tanker's right wing, I thought it looked great. However, as he contacted the basket, I knew something was wrong. The instant his probe hit, even with the proper closure rate, it produced the classic sine wave that indicates improper reel response.

LCdr. Baranek

I'm sure the nugget had never seen this before, and he was unable to respond quickly enough to disengage before the sine wave travelled up to the tanker and back to the probe. Predictably, the force of the 50 feet of hose in motion bent the coupling at the drogue, causing a massive fuel leak. We were now down to one tanker and 24 sets of Intruder crew eyeballs scrutinized every fuel gauge.

We had plans for a single-tanker situation. The strike flight and one of the F-14 flights would hit the remaining tanker and complete the mission. The other 12 aircraft would divert to Scott AFB. We quickly sorted things out. Center took control of the diverting groups and vectored the F-14s toward the field first. My A-6 flight was sequenced behind the fighters. Scott AFB was a comfortable 150 nm away, and we had plenty of gas. My BN and I reviewed the information on Scott in the IFR Supplement.

ATC handled our requests, and the fighters made their approach first. We began our descent, and I saw that the visibility was not as good as we had been told – it was hazy. Still in our six-plane formation, we approached 10 miles on the extended centerline. I couldn't see the runway. I did not want to break up the flight without having the runway in sight, so I pushed in to eight miles. Finally, I saw the runway and detached number six.

I'm sure some of you old salts are asking why I waited so long before breaking up the flight. As I detached No. 2 at two miles, it was obvious that I had made another classic error. There was no way we could land without a dramatic descent. I resigned myself to the embarrassment of having to go around and initiated a wave-off.

As I approached the numbers, I saw the last F-14 touch down, and I looked toward the upwind end of the runway. I couldn't believe my eyes. All five of the other F-14s were huddled around a teardrop-shaped turnaround area at the end of the runway! If I had gone one step further in the cockpit – or better yet, during the brief – and reviewed the field diagram, we would have known that Scott did not have the parallel taxiway that I assumed it did. As I flew up the runway during my wave-off, I thought the Tomcats looked like something out of a Hank Caruso cartoon, stashed together like that.

I watched the last F-14 land and figured we would have to stay in the landing pattern another five or ten minutes until the fighters taxied up the runway to the taxiway. As the last F-14 rolled down the runway, I saw smoke coming from first the right main gear, then the left mainmount. Seeing five of his compatriots at the end of the runway probably startled the pilot, and he applied heavy braking, blowing both tires at mid-field. His Tomcat slid to a halt two-thirds of the way down the runway, turned 90 degrees from the runway heading. What else could go wrong?

Robert L. Lawson

A quick check of our fuel showed that the lowest level was 5,000 pounds, still not critical . . . yet. We called approach to coordinate holding, and they vectored us 20 nm southeast to hold out of the traffic corridor at 10,000 feet. Our first estimate for a clear runway was 10 minutes. The follow-up was another 10 minutes.

Anticipating problems, we settled on Lambert-St. Louis International as a back-up divert. The Scott controllers must have been trained by seasoned Navy CATCC controllers because they were superb at painting a rosy "ready deck" picture that was soon modified by the classic "Delta Six, stand by for new approach times."

Finally, I saw the futility of trying to land at Scott, and as the situation became more critical, I decided to try Lambert. This time, we were smart enough to advise ATC of our intentions; they coordinated our handoff to the Lambert controllers. I broke up the flight early and turned the aircraft over to the controllers, beginning with the most fuel-critical A-6. I thought I had dodged yet another bullet in the day's assault on my brand-new sheriff's badge.

The 50-mile flight to Lambert began as each Intruder was vectored from its holding point at three- or four-minute intervals. ATC advised us that we would be set up for the left runway, sequenced among 727s, 747s and DC-10s. A mental alarm went off: wake turbulence.

I quickly reminded the flight of this possibility, The first aircraft reported field in sight and I began to relax. We flew on but I was jerked back into reality when the controller said to the first aircraft, "AJ502, you appear to be heading in the wrong direction. Lambert is the field on the other side of the river to the north of the city. Come right to 300." I remembered that the TACAN was not on the field. When would it end?

Fortunately, all six aircraft landed without further trouble, and the saga that began with a euphoric CO at Oceana ended with a sober commander kissing the ground when he got out of his cockpit and touching each of his planes to make sure they were, indeed, in one piece.

I really felt that I was on top of things at the beginning of the flight, but I wasn't. I was not prepared and had not thought things through. ◄

Cdr. Bolcar was the CO of VA-35, and is now assigned to Commander, Second Fleet, as Air Operations Officer.

charlie on the ball

By Lt. Mark Peters

The ready-room quarterbacks were screaming, "Oh, you had plenty of gas, enough for three hours. You made the wrong decision." Meanwhile, the pilot was talking to the Ops O. That ominous phrase –"the skipper wants to see you" – was on our minds, too.

It all started eight hours earlier when, after completing our CVIC and aircrew briefs, the SDO told us, "You guys have to launch early because 702's system just went down. DESRON wants you airborne now!"

We launched 45 minutes early in our S-3 for the ASW exercise 20 minutes from the ship. When we were high enough, we established comms with the players. By then, we were receiving sonobuoy data and quickly determined the tactical situation.

The pilot and I were doing some fuel-time-distance calculations, and we saw some interesting numbers: Early launch + not as much gas as advertised + seven hours flight time until scheduled recovery = "very little gas."

We were on our way down for low-altitude ASW when we told 702 (who now was RTB), "We're going to need some gas if we're going to make our scheduled recovery. Could you relay that to the squadron and ship, and let us know whether you've got a tanker for us or whether to make the day recovery before the night one we have scheduled?"

With that bit of housekeeping accomplished, we continued our ASW effort, chalking up some good sub time and kills. An hour later we were halfway through our scheduled on-station period with our fuel consumption as expected. We got the call to tank in an hour. We would have an on-station relief so there wouldn't be a gap in coverage.

When our relief arrived, we rendezvoused with the tanker, joined, were cleared in and plugged. But our Viking wouldn't take gas. We backed out and hit the basket again. The tanker recycled, but still we couldn't take gas.

When this futile effort was over, the pilot and I settled down to some serious number-crunching. We thought we could make it to the scheduled night recovery and be "charlie on the ball." Or we could land earlier and have 2.5 hours remaining when recovered.

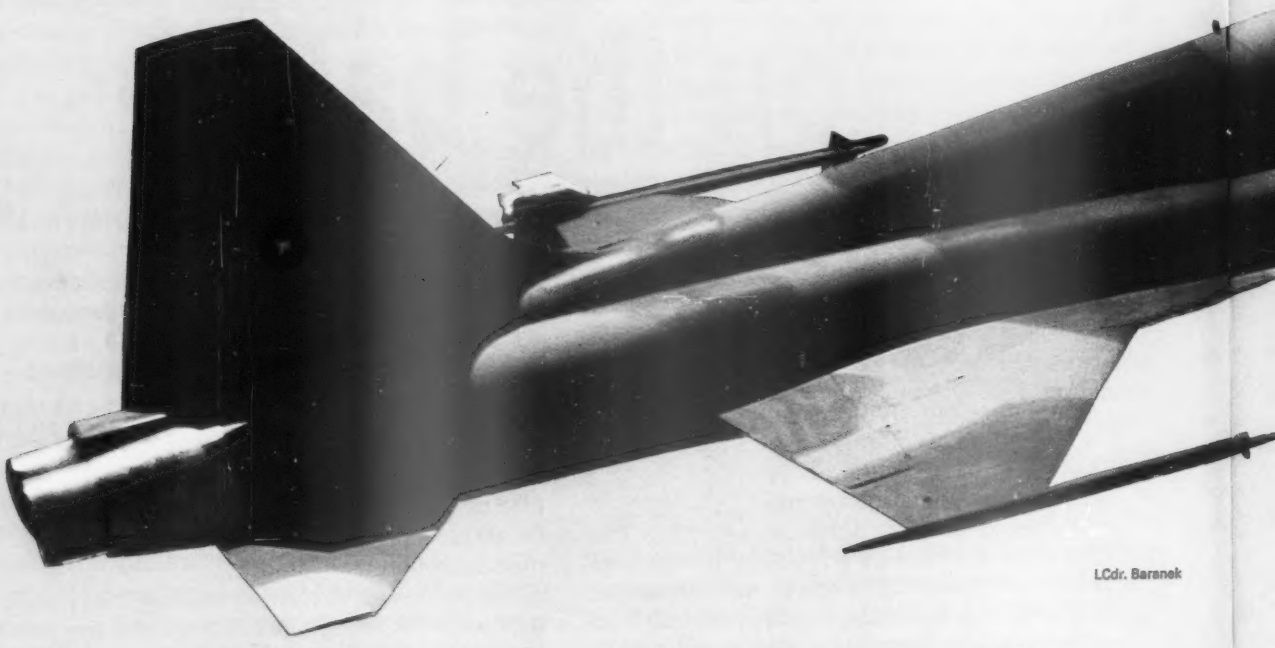
Considering such factors as weather, blue water ops, pilot fatigue, night currency and the fact that not much had gone right during the day, we decided to play it safe and recover early. I said, "Look, it's the right decision, and it will give maintenance a chance to fix the problem and get the plane up for night ops, too."

We called the S-3 rep in Air Ops to get the squadron's feelings on how "important" was my pilot's night currency. We explained the situation and told him that unless otherwise directed, we were going to recover early. We didn't feel it was worthwhile to keep us airborne and possibly put us in extremis just so the pilot could get a night trap. We would have plenty of other opportunities. The rep told us, "Do whatever you think is right."

With the ball back in our court, we carried out our plan and recovered. When we arrived in the ready room, we were needled by our mates for the early return. In spite of various ready room opinions on our flight, our CO said we had done the right thing.

Lt. Peters is a T-47 flight instructor with VT-10.

"Fox Two on the F-5 doing the aileron roll."
"Nice shot. Knock it off. Bogey's joker. See ya on deck."



LCdr. Baranek

Piece of Cake

By LCdr. James W. Herbig

ALL right! Nice fight and good learning points. Miller time. Well, almost. Better get clearance direct to the field. Those clouds are getting big in a hurry.

"Adversary 22 cleared direct. When clear, squawk 1200 and contact tower."

What a bud. Let's see, no problem making the break with 1,000 pounds. I'll drop down to 10,000 feet and scoot underneath VFR.

"Tower, Roman 16, initial 31."

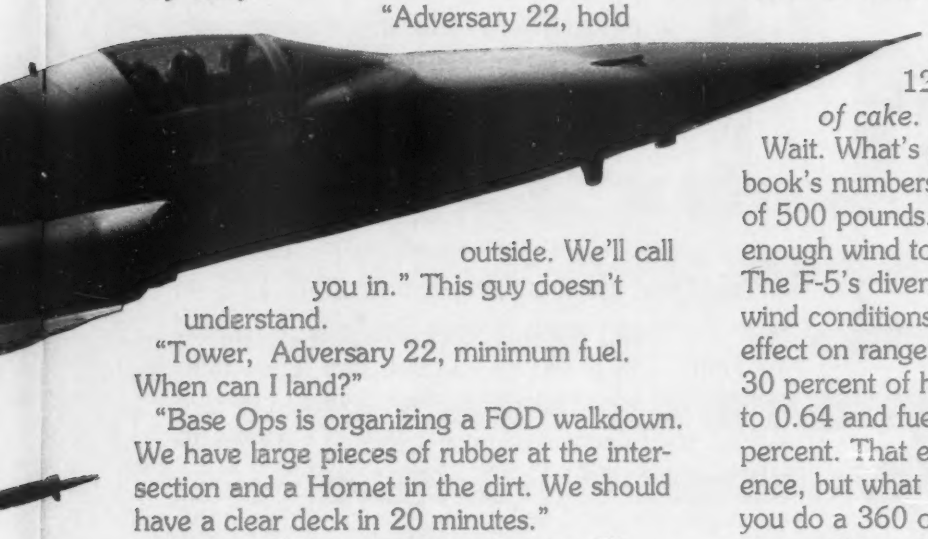
"Roman 16, hold outside the ATA. We will call you in." What the . . .?

"Tower, Roman 16, say reason."

"Roman 16, your playmate has fouled both runways." Great!

"Tower, Adversary 22, 15 miles northeast. Say delay."

"Adversary 22, hold outside. We'll call you in." This guy doesn't understand.



"Tower, Adversary 22, minimum fuel. When can I land?"

"Base Ops is organizing a FOD walkdown. We have large pieces of rubber at the intersection and a Hornet in the dirt. We should have a clear deck in 20 minutes."

Hold on, slick – at max endurance, I'll flame out in 25 minutes. Let's see, bingo is 800 pounds. No problem. I'm 200 pounds fat. That's what the chart says from sea level, and I'm starting from 10,000. OK, say the magic words ("emergency fuel"), climb to 16.5K, cruise at .61M, idle descent at 20 nm. I'll have 500 pounds on deck or two trips around the pattern. *Piece of cake.*

Boy! that DME is not clicking down real fast. Five hundred pounds remaining at 25 DME. Hmm-m. Field elevation is 4,000 feet, and descent speed is 270 KIAS. I need to pull nose up to lower my gear. I can start down now and still have gas for a go-around. Besides, they're VFR with two parallel runways.

Geez, that fuel gauge is low. What did the flight manual say, still accurate at 200 pounds per system? Phew! There's the field. Oh, boy, high and fast. What next? I wonder how green the long table's going to look. Screech! Thanks, Northrop, for good brakes. Let's see. Seventy-five pounds in the right and 125 pounds in the left. *Piece of cake.*

Wait. What's going on here? Flying the book's numbers burned 800 pounds instead of 500 pounds. OK, there's a headwind, but enough wind to burn 60 percent more fuel? The F-5's diversion range chart gives zero-wind conditions, but it doesn't discuss wind effect on range. The rule of thumb of adding 30 percent of headwind would increase IMN to 0.64 and fuel flow would increase 10 percent. That explains some of the difference, but what does the chart tell you? If you do a 360 over homeplate discussing your options with the SDO, you are not on your profile and are wasting gas. If you descend early to stay VMC, you are not on your profile.

How early do you dirty up? The profile says 270 KIAS, idle and clean descent. There's no mention about going dirty. It does say to reserve 300 pounds for the approach. Being dirty for five to ten miles at low altitude eats up precious fuel. With a north-south runway and an approach from the east, you need some amount of offset to land, adding distance to your profile.

In setting a bingo fuel in any aircraft, you can read the numbers off the chart, but it never hurts to pad the amount for factors and intangibles not included on the chart.

LCdr. Herbig is the Safety Officer for VA-27. He was previously assigned to VFA-127.

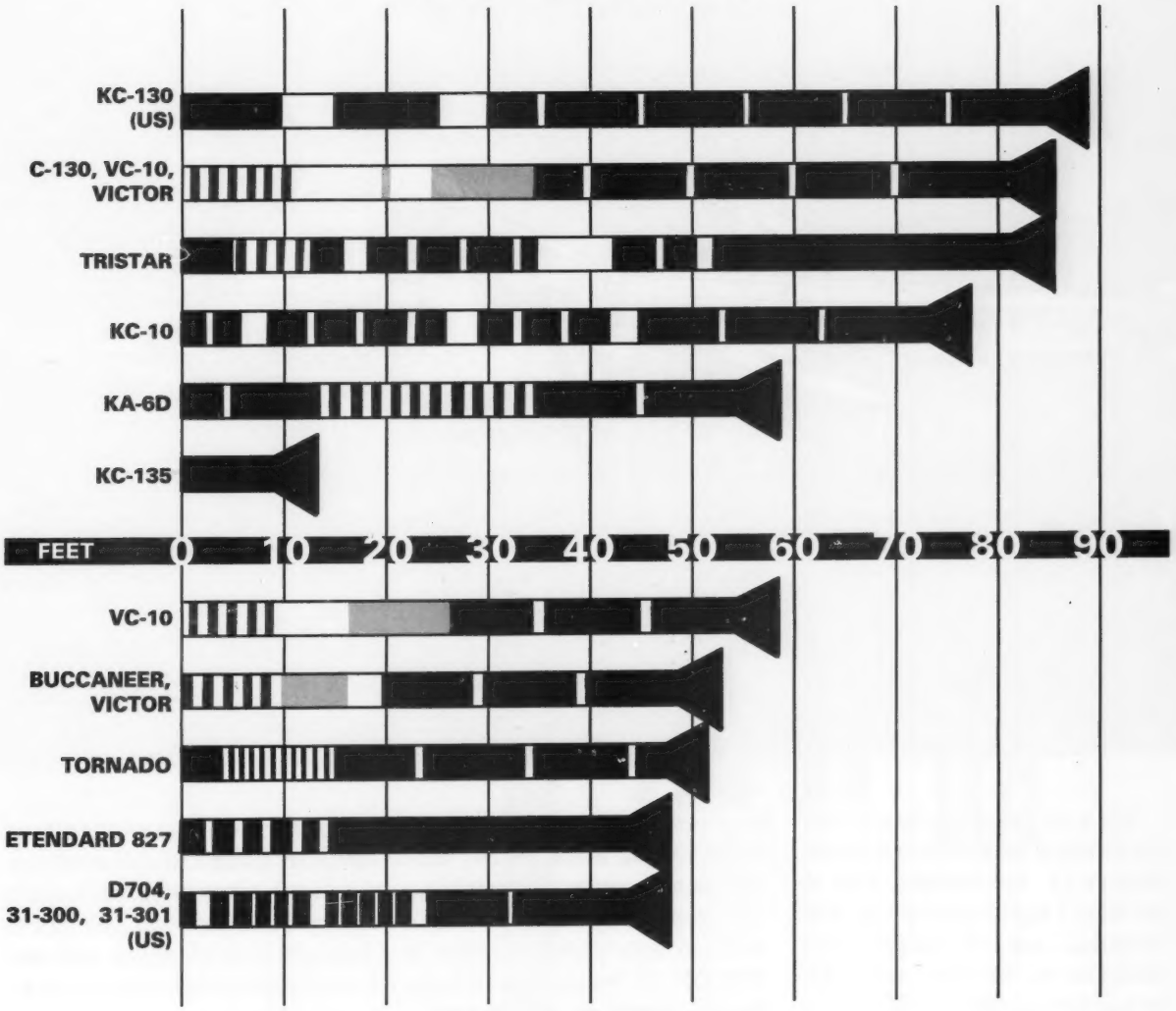
Don't Get Hosed!

Most aviators just want to gas and go. After all, they think, if you've seen one hose, you've seen them all. Not so fast, basket-breath! In general, refueling procedures and indicator lights are similar from tanker to tanker. However, hose markings differ and some new tanker signal-light combinations were invented to pass essential information. Since all reel-response hose systems operate basically the same, why aren't hose markings and indicator lights standardized? No one thought things needed to be that way. Each service and country designed visual tanking and formation cues based on safety-of-flight parameters such as fixed- versus rotary-wing receivers, vertical and horizontal clearances between tanker and receiver, and differences in hose refueling ranges. Interoperability, a bureaucratic term not found in Webster's, has opened the door to aerial refueling from other services and nations. In 1990, projections list 591 drogue-equipped tankers (including buddy stores, but not KC-135 BDA kits) and 7,521 probe receivers in the free world. If you're curious about where your gas comes from, the following tables will be of interest. Sometimes the snakes are outside the cockpit. ◄

By Cdr. Gary Hudspeth

Cdr. Hudspeth is an A-6 pilot with tours in VA-65 and VA-35. He is currently the Safety Officer for COMTACWINGSLANT.

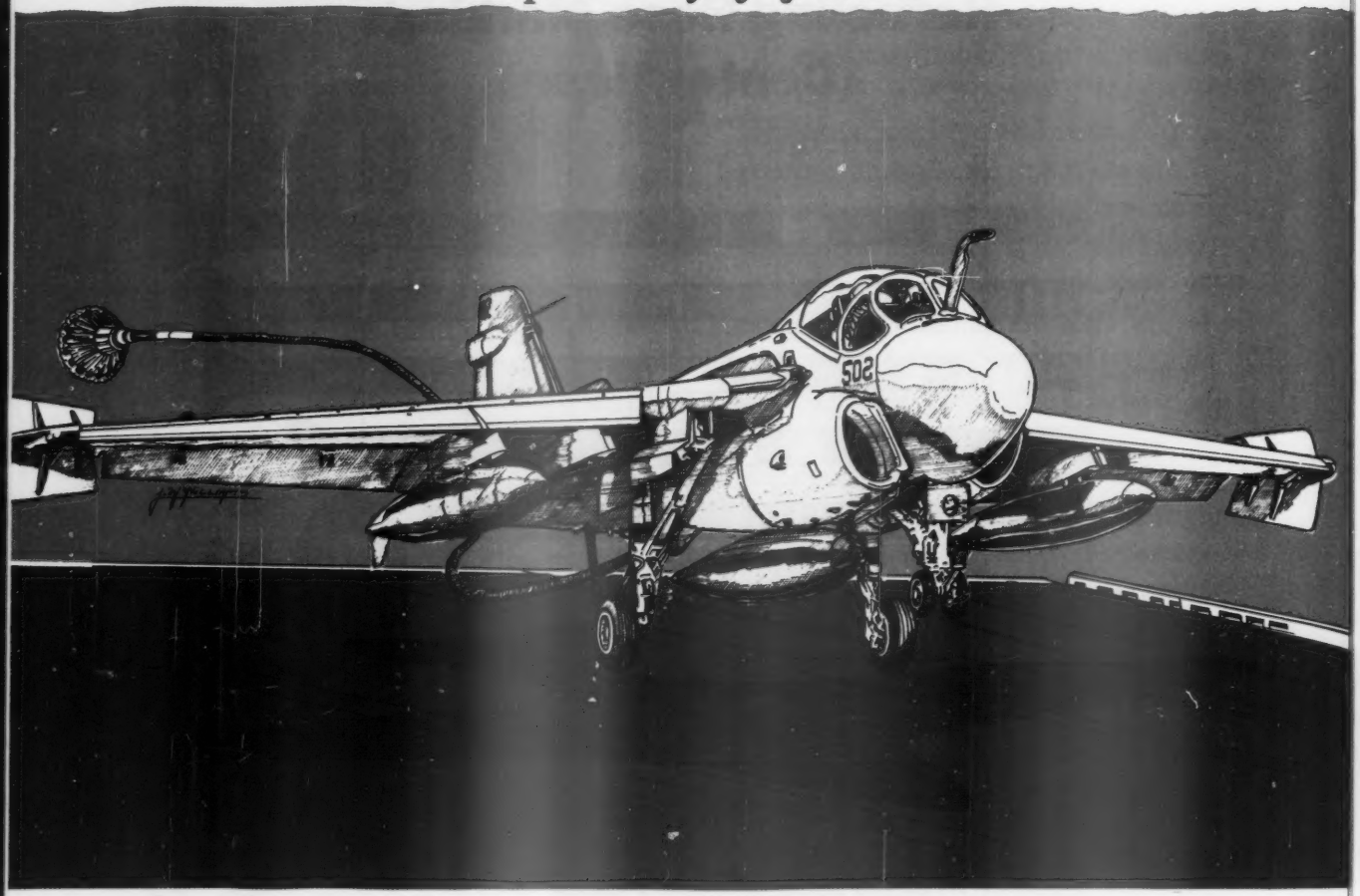
Refueling Hose Markings
(Center Hose)



(Wing Pod Hose)

Graphics by Laurinda Minke

"I checked the seals on my dry suit and for the first time I considered the possibility of ejection."



WE were ordered to launch into low clouds of the icy North Atlantic. Because of bad weather, most of our wing's flight schedule had been cancelled, and we thought ours would be, too. However, two fighters had been launched to escort Bear reconnaissance flights, and our KA-6D was tasked to deliver.

My pilot and I caught the weather brief and did a normal brief. I would have preferred the warmth of the Indian Ocean, where we had been two months earlier. Our visibility was obscured by rain showers. To make matters worse, we were in EMCON to escape the Orange Forces opposing us during a multiforce exercise.

We launched with another tanker accompanying us. After a few minutes airborne and still in the clag at 15,000 feet, for a vector to our customers. The TACAN wasn't up. I began correlating the tanker's Omega with my own DR plot to keep track of where we were and where our ship was supposed to be.

At 22,000 feet we ran the hose out and cleared the first guy in. All indications were normal as the first fighter drained 4K from us. He pulled away, and the second fighter was

cleared in.

As he approached the basket, he called out that fluid was leaking from our basket. My first thought was to ask if it looked like fuel or hydraulic fluid. I recalled that NATOPS said the receiver aircraft should disengage immediately. The F-14 had already plugged when I ordered him away.

My pilot told me the combined hydraulic gauges had dropped about a third of their normal pressure. A quick confirmation from the fighter guys drove the point home. We had lost half of our hydraulic system.

With our hose trailing, we were at 22,000 feet, 350 nm from the nearest divert (Iceland), and down to one hydraulic system. In the A-6, flight controls are powered by two separate systems, and there are secondary ways to lower the gear, flaps and slats, and the tail hook. The hose streaming out didn't help, and there was no hydraulic power to retract it.

The only option was to jettison the hose. We tried, but it wouldn't go. We used the procedure for single hydraulic failure. We went by the book. A wingman had joined up to help out. The ship came out of EMCON to assist.

The pilot said that the hydraulic needles were fluctuating. This was serious because no hydraulics meant no control, or very limited control with the backup system. Since the nearest divert was 350 miles, I checked the seals on my dry suit and for the first time considered the possibility of ejection.

We continued through the PCL, lowered the flaps and slats, blew the gear down, dropped the hook, and broke out less than two miles behind the ship. Now we were committed to an arrestment since we were below dirty bingo to divert. My pilot flew a flawless approach to an OK-2 wire. The LSOs dove for the net as we landed, but the refueling hose stayed with the aircraft.

I learned a lot that day. We followed the blue book word for word, and it didn't let us down. ◄

Lt. Barker is with VA-176.

Tanker's Turn for Trouble

By Lt. E.G. Barker

EXPECT the UNEXPECTED:

PH3 Douglas E. Houser

We were on a day VFR mission as part of a coordinated ASW exercise for our battle group. Eventually, the submarine ditched us and we put our lost-contact plan into operation. Our frustration was compounded when we were pulled off the problem for SSC identification of a possible Orange Force contact.

We couldn't find anything, and our search had driven us a long way from the exercise. We had to have more fuel before returning to the hunt. Instead of returning to the carrier to loiter in the starboard delta pattern, we headed toward a HIFR-capable tin can. As luck would have it, when we reached the ship, she had just recovered her H-2 for refueling.

We had briefed that if the ASW problem required us to HIFR, we would begin refueling with at least enough gas to get back to Mother, or we would automatically "bingo" to her. Our crew had seen enough situations where refueling did not go as planned. We quickly calculated our fuel and distance from the carrier. We told the tower about our self-imposed time restriction and they assured us we would be refueled in time.

As the last minutes passed, the H-2 lifted, and we moved in. The fuel sampling, hook-up, and slide over the side went fairly quickly and by the time we began to pump, we were at bingo fuel.

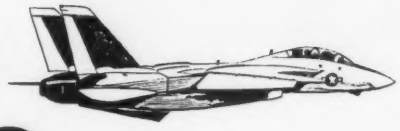
Just when we thought we had it made, the aircrewmen calmly reported a fuel leak. By the time I asked them how much and where it was coming from, they were no longer calm, and the leak was getting bigger. The hose had split all the way around the nozzle, drenching them and the rest of the afterstation with JP. They called that the hose was away as they launched it out the cargo door and I made a bee-line toward "home plate."

The destroyer's tower confirmed our fear that there was not another H-3-capable deck available. That left us only our carrier, at the edge of our range. We milked it back at max conserve and the Boss wasted no time in making a spot ready for us. My copilot confirmed the attitude limitations for low-fuel state, and I kept the aircraft within them as we rode the glideslope down to the deck. We all let out a sigh of relief as we touched down.

We had low-fuel lights on the caution panel, and I knew we had cut it too close for comfort. I hate to think what would have happened if we had not briefed properly.

Lt. Hale is assigned as CVW-2's ASW Officer in USS Ranger (CV-61). ◄

Have You Got A L O O S E Rung?



By Lt. Neil Jennings

WE were running max conserve intercepts, followed by 1 v 1 v 1, fuel permitting. In the late afternoon off Gonzo Station, the weather was clear and a million. We'd be back for a daytime recovery. No problem burning right down to a fuel ladder that included enough gas for 30 minutes of max conserve at the anticipated recovery time. That was our first mistake.

My fuel ladder was fairly conservative, but a 1 v 1 v 1 is a rare training opportunity.

"Just one more turn in Zone 5 and I should be able to take the shot and still have enough gas to get home," I thought. Mistake number two.

By the time I echoed a knock-it-off call, I was well below my planned fuel state. Once you're in a hole, it's time to be real smart about taking care of your national asset. Unfortunately, it seems that the aviator IQ is directly proportional to the amount of fuel on board. As the fuel disappears, the ability to make an intelligent decision also fades.

At this point, my thoughts were, "Only 500 pounds below ladder. I can hack it. Trap on the first pass. No problem." Mistake number three. What I should have been thinking was, "Is tanker fuel available? How much fuel could I save if I fly a max-conserve profile back to the ship?" I had several options. Fly back to the ship at max conserve, make an idle descent, confess and ask for the duty tanker, or take a low-fuel straight-in instead of following my lead into the break at 450 knots.

We followed our lead back to the ship at 275 knots, 60 knots above max conserve. Then, we held in low holding for 15 minutes, went into the break, spun twice, and on the first pass took a wave-off for a fouled deck. The next two passes were "high-fast-all-the-way" to identical bolters. Both the left and right low-fuel lights came on indicating about 2,000 pounds remaining.

We plugged into the tanker, and I heaved a sigh of relief when the green light came on. Ten minutes and 4,000 pounds of gas later, we were once again on our way into the break. I had no problem getting aboard on the fourth try – it wasn't an OK 3-wire. If the tanker had been sour, we'd have been looking at a barricade on that last pass. Not a pleasant thought.

In the Tomcat community, we are continually gas-conscious. There's a fine line between squeaking out a little extra training and bringing the aircraft back at max trap fuel every time. When planning fuel, we consider several important areas. What is the current and forecast weather? How many aircraft will be launching just before recovery? How long will the launch take? How long is the cycle? Are we scheduled to get gas? Do we have enough time to fly back from station at max conserve, or will we have to come back at a higher fuel flow to make the recovery? Can we expect to be the first one crossing the ramp, or will there be delays caused by bolters and wave-offs?

When you are flying around the carrier, it pays to be extra cautious with fuel. Unexpected delays can quickly eat up your fuel reserves. Even a few hundred extra pounds of fuel for recovery will give you extra confidence, not to mention the fact that extra gas will definitely keep you in the air longer.

Once you decide on a fuel ladder, stick to it. Sure, there will be many times you will land and then think, "I didn't really need to bring that much gas back." But the one time that the recovery doesn't go as planned, you'll be grateful for carrying around that little extra instead of burning it up. It takes flight discipline to stick to the ladder.

Lt. Jennings is a first-tour aviator with VF-1. He is the squadron Pilot Training Officer.

The Missing Lin

By LCdr. John D. Ingersoll

OUR Seahawk launched on an alert to participate in an ASW exercise 70 nm from our ship. Included were two SH-2s and their FF mother ships and a P-3 from a nearby base. With our Data Link, we could exchange information with the ship. A highly reliable system, it works well — perhaps too well.

Our helo assumed the high position at 5,000 feet, enabling us to maintain link and still process sonobuoys without interfering with the SH-2s at low altitudes conducting MAD runs. Similarly, we would not interfere

with the P-3 above them seeding and processing sonobuoys. With addition of a tail ship, it seemed to be a classic team-effort ASW mission.

After we arrived on station, the SH-2s RTBed for the night because of low fuel. With the low station now open, we hoped to use our MAD to check its contact. We descended and as soon as we left 5,000 feet, we lost Data Link contact with our ship because of range and atmospheric conditions. No problem. The tail ship (the on-scene commander) would keep them posted and, besides, it was only 70 nm.

The mission went smoothly, and we tracked the contact for more than two hours with little thought given to the fact that the contact was moving directly away from our ship. With an hour of fuel left (plenty for the 70 nm to homeplate), we moved up to 5,000 feet to restore Link with our ship and start for home. Here's how it went:

...With visions of a ditching in the sea on a moonless night, the pilot ordered the hose disconnected and reconnected...

At 5,000 feet — We were too low. We kept climbing and tried the radar.

At 6,000 feet — We made some 40 radar contacts within range of our ship's last position. We continued to climb, and we tried interrogating IFF.

At 7,000 feet — We got no IFF response. We were too far out for TACAN. We continued closing and climbing and had the on-scene commander call them up on the HF to get a position.

At 8,000 feet — The OSC couldn't raise them. We sought the last position reported. We kept climbing and closing.

At 9,000 feet — Their last known position was 95 nm away a half hour earlier. We made nine or 10 possible contacts at that range. How about bearing? We decided to orbit here since UHF comm with OSC became intermittent.

At 10,000 feet — Our maximum allowable altitude. No bearing to our ship. They still didn't have a bearing on us. None of the ships in our area had a deck certified for the Seahawk.

Then we thought about HIFR (helicopter inflight refueling). We learned there was a ship capable of night HIFR out there, and it had a ready deck.

It was decision time. Should we fly 70 nm or more over open water in search of Link, TACAN, IFF return or voice comms while carefully checking each radar contact? Or should we turn around and fly 25 nm to a floating gas station? Turning around would mean that we'd have no chance of reaching homeplate if the HIFR was unsuccessful.

A HIFR was never a sure thing, and a night HIFR was even worse. The crew had never done HIFR before. Nevertheless, we decided our best chance was to turn around and use our remaining 40 minutes of flight time to attempt HIFR.

Our Seahawk arrived at the refueling ship with a ready deck and we began our approach. We brought the hose on board and connected. "Start pumping." Nothing happened.

With visions of ditching in the sea on a moonless night, the pilot ordered the hose disconnected and reconnected. We again said, "Start pumping." Slowly, almost imperceptibly, the digits on the fuel gauge started to increase. It was working. Soon we heard, "Top it off." With this full bag of fuel, we could find homeplate anywhere.

We had a more relaxed transit home, and we established Data Link with our ship at 10,000 feet, about halfway through the 110 nm home. That's right, it was 110 nm. If we had tried for homeplate instead of HIFR, we would have been flying on fumes on final. Data Link is great, but don't get lulled into such a false sense of security that you can't find your way home without it. ◄

LCdr. Ingersoll is Officer-in-Charge of HSL-42's, Det 2, recently completing his third deployment in a LAMPS detachment.

Late Night Confessions

By Lt. T.J. Walker

"Approach, 501, state now 3.2."
"501, say again."
"501, state now 3.2."
"501, confirm state 3.2?"
"501, affirmative, state, 3.1!"

A dark night, blue water ops in the middle of the Pacific...not a good situation.

I was in the middle of my first cruise. With more than 300 hours and 50 traps, the first traces of "salt" were beginning to form. I was looking forward to earning my Centurion Patch and jumped at the chance to slide into a sudden opening on the flight schedule.

It was a routine night SSC mission. We took extra time and briefed thoroughly, since we did not fly together regularly. We launched, proceeded to our sector, and accomplished our mission. We soon returned to the ship. We entered marshal, checked in, and waited.

It was dark. No horizon, a pitching deck and heavy rain. Boarding rates were taking a beating. We held in marshal and waited for our turn.

A generator fell off line, but reset normally. The compass drifted but it had been doing that the entire flight. If things weren't bad enough already, the ship decided to make a 180-degree break turn in the middle of the recovery. CATCC began passing radar vectors to everyone, trying to get us behind the proper end of the ship. Better hang onto our gas until we sort this all out.

We started receiving random vectors. There were jets everywhere! I wondered if anyone had the big picture. Finally, we turned toward the final bearing.

"Nine miles," I said. Dumps on. We still have a thousand pounds to go. Right turn to final. This feels strange...a little vertigo...no problem. Landing checklist complete.

"Six miles."

"501, negative needles...negative bullseye." More vectors. Approach is having a hard time locking us up.

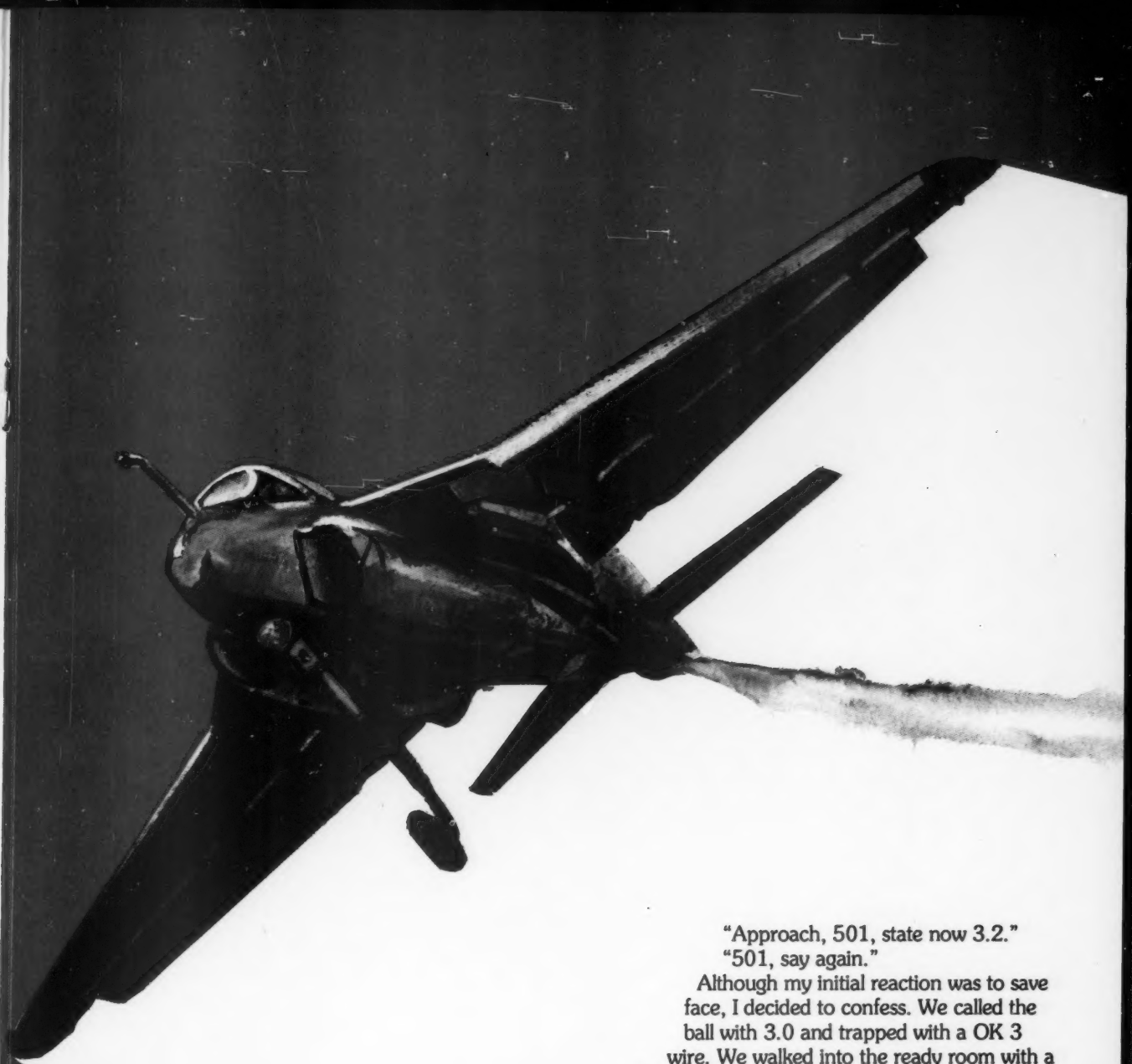
"501, lock on. Say needles," the ship called.

"Fly 'way' right and up." Nice turn in.

"Four miles."

Suddenly I looked back to the fuel gauge and I could instantly see we had blown it. The needle was quickly passing 3.6. Dumps! Shut the dumps off! Okay, no problem. Continue the approach. I can't believe we've been so stupid.

"Three miles." The boat's in sight. I'll just call 6.0 on the ball. We'll trap and nobody will know the difference. But what if we don't trap?



"Approach, 501, state now 3.2."

"501, say again."

Although my initial reaction was to save face, I decided to confess. We called the ball with 3.0 and trapped with a OK 3 wire. We walked into the ready room with a sigh of relief, shaking our heads. I added two major lessons learned to my carrier ops bag of tricks.

Fuel management around a CV is either feast or famine. Crew coordination is a must. Don't forget the dumps.

If you mess up, fess up. Once we were back on deck, we had to explain to a lot of heavies, but not as much if we had come off the bolter and turned downwind with one pass before rigging the barricade. By letting approach know our situation, they had time to help us. ◄

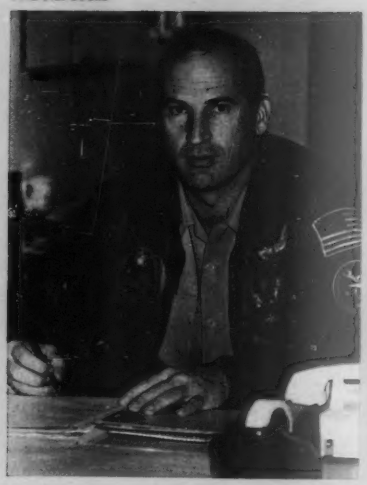
Lt. Walker is a BN with VA-95.

approach 1989 WRITING AWARDS

Command Writing Award

VA-95 (second year in a row)
(10 articles published in 1989)

PH2 S.L. Cooke



LCdr. Owsley

Article of the Year

LCdr. Clark Owsley, COMASWINGPAC
"The Problem with JOs" (February)

Capt. Joslin

Contributor of the Year

Capt. R.E. "Buck" Joslin, USMC, ASO School "Moments From Disaster" (January), "Real Men Don't Do Hover Checks" (May) – Innovative approaches to safety problems facing the helicopter community. Capt. Joslin has been a steady contributor for the entire year.

Honorable Mention

LCdr. Pat LeBlanc, VF-24; LCdr. Gregg Howard, VF-43; Lt. Randy King, VX-4; Capt. Robert Adkisson, VFA-125; LCdr. Jerry Wilson, VR-56; Cdr. John Schork, CO, VA-95; LCdr. Dave Parsons, VF-32; Cdr. Dick Shipman; Stephen Coonts; Hank Caruso; Peter Marshall Lane; Craig Kodera; Mrs. Marty Feldman; Capt. Bill Shepherd.

What Tanker Pilots Hate

By Lt. Ed Defty

ATTACK pilots who double as tanker pilots really don't mind going around in circles, but there are some things we hate. Some are little; others seem to find their way into mishap reports.

There's the guy who launches off the cat, turns back overhead and immediately calls, "Off-going say angels." Where was his mind during the brief? Isn't there a tacpro that spells out where the oncoming and offgoing tankers are going to be?

Then there's the guy who doesn't bother to switch up tanker common and keeps calling on land-launch for "tanker posit." If he'd realize it's as briefed, we wouldn't have to play frequency roulette if we need to talk to him.

Fighters often climb through the tanker pattern on their way up to gas at a higher altitude. They should listen to where all the tankers will be, and be on their altitude before returning overhead.

Sometimes a pilot doesn't keep a good lookout. As the tanker joins on him, he gets his head out of the cockpit, sees the tanker, and does a big yahoo to join. We are just as capable of joining on our customers, and there's no dishonor in letting us do it. In fact, it will usually expedite things. Speaking of rendezvous, it would be nice if everyone would pretend they were students back in the training command and work to stay on bearing line and altitude. More than once I've had to make a call to sort out two converging fighters (one sucked, one acute), both intent on getting into the basket first and unaware of their impending midair.

What if you join on the wrong tanker? Well, the right thing to do is admit your mistake, cross under and depart to the outside of the circle. I've seen too many guys who seem to think that maneuver is too tough; they just pull off into the circle and into the other fighters who are joining up.

Once you've joined up, don't drop your guard. Others are still joining on you or flying off your wing. If you need to look inside the cockpit after joining, be extra cautious. More than one customer has tried to hit the tanker while checking the position of a switch.

Once the basket is out, don't be overwhelmed with anticipation. Wait until you are cleared in. An extended hose isn't an invitation to plug. If the response hasn't been set, the hose may try to tear off your probe. Once you're plugged and receiving, tell us if anything looks funny or doesn't seem to be working normally. Poor response? Oscillating basket? Lights don't work? Fuel leaks or hydraulic leaks? The only way to fix a gripe is to write it up, which might make that crucial night plug a little easier for some other unlucky "bolter king."

When you're complete, take your give and clear to the outside. Once you've cleared, wait until we kiss you off. Then, finally, you can go out and do whatever it is you do with all that gas we give you.

And even though we'd rather be dropping bombs, we'll serve the next customer. ◄

Lt. Defty is an A-6 pilot with VA-185. He is the squadron's Aircraft Division Officer.

Ens. Robert Jones
VT-6

During a student solo aerobatic flight, Ens. Jones's T-34C's engine flamed out during the vertical portion of a loop. He pushed the nose over to attain a dead-engine glide and performed engine restart procedures. He achieved a light-off when the standby boost pump activated.

Ens. Jones turned toward OLF Brewton, the nearest field, and descended to intercept the emergency landing pattern. He made an uneventful landing with no damage to the aircraft.

BRAVO ZULU

Lt. Greg Gallagher
Lt. Wes Gray
AW3 Todd Rohde
HSL-37

Easyrider 58 launched from USS *Ouellet* (FF-1077) on a night surface surveillance mission in the Sea of Japan. Eighteen miles from homeplate, the smell of burning insulation filled the SH-2F. Lt. Gray (copilot) turned toward the ship while Lt. Gallagher (HAC) broke out the PCL. Along with AW3 Rohde (aircrewman), he tried to identify, isolate and secure the source of the fire. The crew declared an emergency and *Ouellet* closed the helicopter at maximum speed. Working from memory, AW3 Rohde provided Lt. Gray with the last known vectors to the ship as the copilot flew with partial panel and without ASE (both generators had failed).

The crew completed NATOPS emergency procedures but were unable to regain AC power. A medium-frequency vibration developed throughout the aircraft, followed by the smell of burning metal. Secondary indications of a deteriorating combing gearbox and No. 2 engine also appeared. All associated oil pressures and power output remained normal. However, the crew completed preparation procedures for ditching in the event of gearbox failure.

After a brief discussion, they chose to leave the No. 2 engine on line. Faced with multiple conflicting cockpit indications, the crew flew at 100 feet and 70 knots, integrating NATOPS procedures for engine failure and gearbox failure.

Approximately eight miles from the ship, the vibrations increased dramatically and the 30-minute fuel light lit. With all emergency procedures completed and rechecked, Lt. Gallagher took control while Lt. Gray called out altitude and airspeed during the remaining miles of the approach. Lt. Gallagher flew a night, ASE-off, partial panel, single-engine approach to a safe, no-hover landing.

Postflight inspection revealed the No. 1 generator had caught fire. The intense heat caused extensive metal deformation in the surrounding upper-aft transmission decking area, loosening the mounting support rods of the combining gearbox. Wire harnesses in the area were completely destroyed, and the generator control wires were burned from each generator to within 3 feet of the aft cabin. ◄

From left to right:
Lt. Wes Gray,
AW3 Todd Rohde,
Lt. Greg Gallagher

(L) Lt. Henry Bridgham
(R) AW1 Neal Lawson

Lt. Henry Bridgham
Ltjg. Jay Martin
AW1 Neal Lawson
AWAN Randall Gordon
AWAA Mark Garver
HS-1

Shortly after midnight, Lt. Bridgham and his crew were on a routine, low-level, overwater training flight. While their SH-3 was leaving a 40-foot coupled hover, the crew heard a muffled bang as the No. 1 engine lost power.

Lt. Bridgham (IP) saw the NR rapidly decaying and took the controls from his copilot, Ltjg. Martin. He called for full power. Because of the low NR and low altitude, the crew was committed to a water landing.

Once on the surface, they completed the after-water-landing checklist and prepared for a possible rollover. They jettisoned the helicopter's external stores, deployed the flotation bags, and lowered the landing gear.

Lt. Bridgham taxied the aircraft 10 miles to the shore, which took 30 minutes. The crew wasn't injured, and the only aircraft damage was to the ADF antenna and lower anti-collision light as the aircraft settled onto the sandy beach.

Postflight inspection revealed the cause of the engine failure as engine-freewheel-unit roller spitout. This relatively new phenomenon in the H-3 community is attributable to the age of the aircraft components. "Spitout" occurs when the engine transmission's clutch mechanism disengages because of worn parts, causing the engine to overspeed and shut down.

Cdr. J.B. Renninger
Lt. Tom Fasanello
Lt. Brian Bowden
AE3 Manuel Dediego
VS-24

During USS *Theodore Roosevelt's* (CVN-71) first cruise, Scout 705 launched on a night tanker mission. After raising the gear handle, Cdr. Renninger (pilot) saw that the nosegear indicator was barberpoled. Another aircraft confirmed that the nosegear was in a trail position.

Referring to the PCL, the aircrew performed the necessary NATOPS procedures. The crew and the shipboard advisors decided that a touch-and-go should be made, holding the nosewheel off the deck.

The S-3 touched down as planned, but the nosegear collapsed. The pilot did not have enough elevator authority to rotate to a takeoff attitude.

As the Viking skidded down the deck, the LSO called for ejection, which Lt. Fasanello (COTAC) initiated. The escape system failed, however, and only Lt. Fasanello ejected, landing safely on the flight deck.

Cdr. Renninger, temporarily blinded by the flash of his COTAC's seat, flew the aircraft away from the water. He orbited overhead, but the S-3 began losing hydraulic pressure. The ship's flight deck crew rigged the barricade, and Cdr. Renninger brought the crippled jet in for the first-ever S-3 barricade arrestment.

Postflight examination of the ejection system revealed that the Ejection Mode Selector Valve had malfunctioned. A fleet-wide inspection found 10 other S-3s with the same problem.

Cdr. Renninger received the Air Medal.

From left to right, AE3 Dediego, Lt. Bowden, Lt. Fasanello, Cdr. Renninger.

TANKER

By Lt. Scott R. Vasina

My BN and I manned up our KA-6D at NAS Fallon for a night inflight refueling qualification sortie. After launch, we established our pre-briefed, 14,000-foot, 250-knot tanker track. Our tanker was checked "sweet" by the safety observer crew, two RAG instructors. They took position on our starboard wing to monitor the replacement's progress.

The first section rendezvoused and completed four dry and two wet plugs each, then departed. The second section moved into position off my port wing and was cleared to plug.

The pilot plugged on his first attempt, but boresighted the basket and lost track of his closure on our tanker. He continued to close until he entered our jetwash and hit us.

The force of the collision broke off our starboard horizontal stabilizer, the rudder and part of the port side of the vertical stabilizer. We found ourselves in a 40-degree dive. There was just enough backstick authority with the single stabilizer to return to level

flight.

During our transit back to Fallon, my BN broke out the PCL and read the damaged-aircraft procedures. The safety observer joined on us and described the damage to us — none of which we were aware of. We proceeded to an uninhabited area, a nearby target range, and did a slow-flight check of the aircraft. We elected to perform a no-flap/no-slat approach to an arrested landing with an LSO on station.

Later, a number of thoughts came to mind, some pertaining to the mid-air and some concerning the tanking mission in general:

What if this had happened overhead the CV at 6,000

1. feet, a common TACPRO tanker altitude? In TACAIR we brief minimum ejection altitudes for bombing missions, but do we really go into it in detail for every flight?

Worse, imagine yourself as the hawking tanker, or the

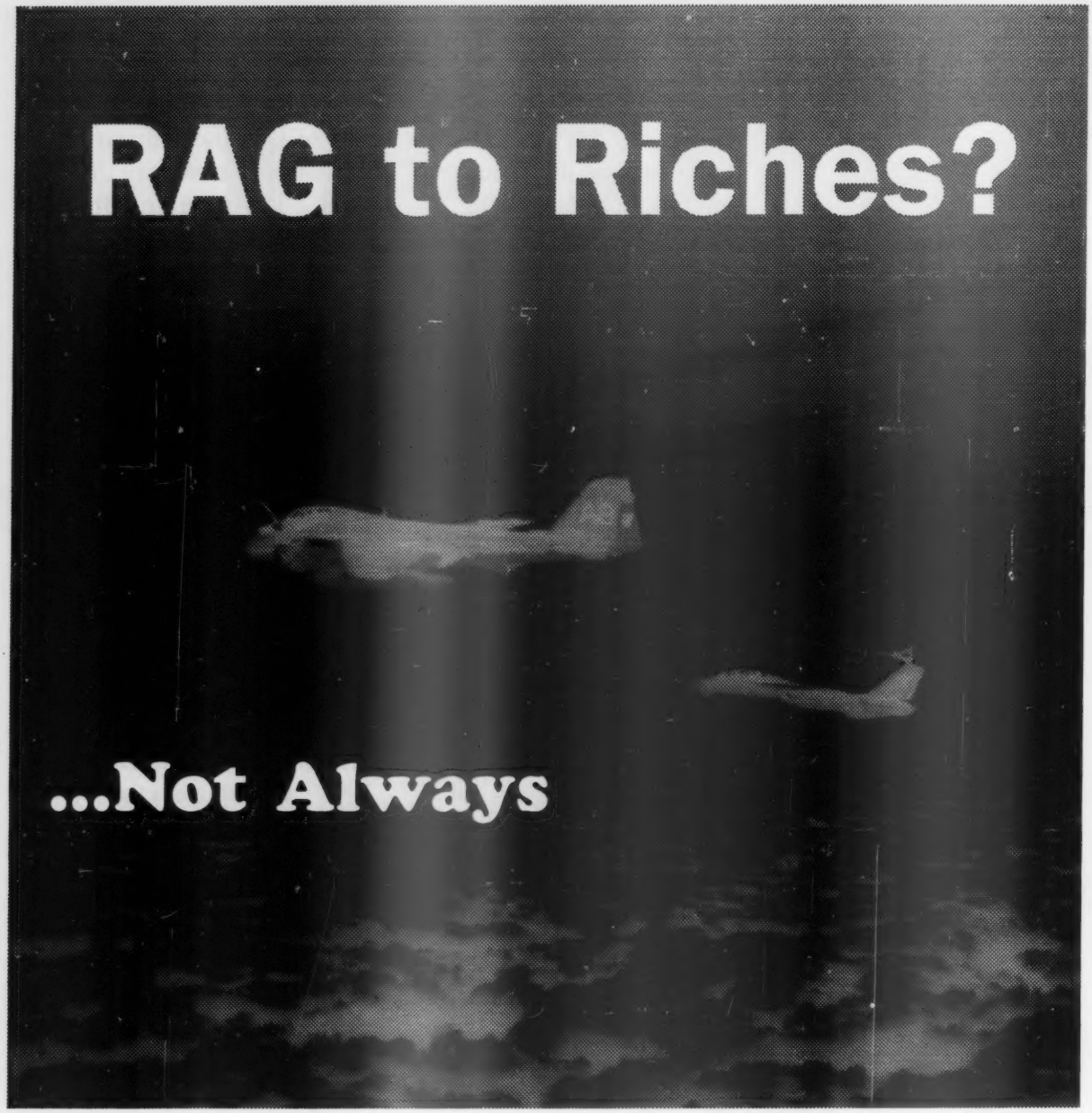
2. low-state aircraft who just boltered and is going up to the tanker. Then this whole process begins at altitudes as low as 2,500 feet at night or 1,500 feet during the day. Crews need to consider immediate ejection. Think about crew coordination. It's a waste of effort if

3. both sets of eyes are staring at the same thing. Discuss individual responsibilities before tanking. This should include lookout responsibilities in the pattern. Even during a normal plug, the tanking aircraft's bow

4. wave pushes the tanker's tail up slightly, which can cause the tanker to start a descent. Reefing the stick back to maintain altitude in this case could also cause a mid-air. Also, the tanker can exhibit minor pitch oscillations when the drogue is extended or retracted. This motion sometimes surprises new tanker pilots as well as receiver pilots who are joined on the tanker. ◄

Lt. Vasina is an instructor pilot and LSO with VA-42 with over 1,300 A-6 hours. He received the Air Medal for his handling of the crippled tanker.

RAG to Riches?



...Not Always

By Lt. Scott Segars

SOMETIMES being just a little above average can hurt, especially when you're a fresh-out-of-the-RAG nugget.

Toward the end of an F-14 night intercept hop, practice tanking came up in a conversation between a section leader and wingman. My senior RIO asked me if I wanted to do some plugging.

Without hesitation I said, "Let's go."

My last plugs were in the RAG three months earlier. I thought that

...I had pierced the basket webbing. Then tunnel vision kicked in, and I forgot all about closure and the KA-6...

day plugging would have been a good idea before this night stuff. However, I did it well in the RAG, and now I was "operational." This is how the big boys operate, I figured. They don't need practice during the day first. Or do they? The brief was vague. Were we going to tank or not? This question was left up for grabs with most aircrews deciding not to tank. Our section lead headed toward the KA-6. He did his plugs, and now it was my turn.

The wings on my aircraft began to act up, and I couldn't get them to come back manually. I could have put them back with the emergency handle, but I decided to blow off the extra stability that a slight aft-wing afforded, and plug away. Finishing the checklist, I stabilized behind the basket and made my first attempt. I missed.

On my next try my RIO said not to look, and I decided to maintain discipline and not even venture a peek.

"Up and to the right," he said. "A little more. Good, good."

Hearing those words, I thought I was in the basket. I looked over and saw I had pierced the basket webbing. Then tunnel vision kicked in, and I forgot all about closure and the KA-6. I was concerned about extricating my aircraft from the webbing.

Suddenly something to the left caught my eye. It was an anti-collision light that seemed as close as my cockpit instruments.

To avoid a midair with the KA-6, I pulled back on the power and pushed down. That was close.

Back to the probe, I saw that it was out of the basket, but there was fuel streaming. I had broken part of the probe. Now what?

We decided to close the probe, monitor our fuel carefully and get back to the ship. I learned a lot from this incident:

- Tanking is a close-formation evolution, not just flying formation on a hose and a basket. Fly the aircraft.
- Cover everything in the brief no matter how long it takes. New guys shouldn't be afraid to ask a lot of dumb questions.
- Know your limitations. Doing well the first time sometimes puts expectations higher than they should be.
- During the flight I didn't discuss tanking with my RIO. Some pointers from the more experienced crew member would have helped.
- Practice, practice, practice. Make the routine hop hurt a little. You'll be glad you did when things get "interesting." ◄

Lt. Segars is the AE Branch Officer for VF-21.

STAB of the HORNET

By Lt. Steven R. Sandberg

I WAS fresh out of the RAG in my first fleet squadron. We had been on board for three weeks and were working up for our summer Med cruise. Everyone was getting qualified to tank from KC-135s, which I had heard horror stories about. My whole experience with inflight refueling consisted of one day and one night sortie plugging an A-7 with a D-704 buddy store.

My flight lead went through a painfully thorough brief. He answered all questions and covered probable contingencies. After takeoff, we headed toward the Warning Area for our rendezvous with the tanker. My lead was first in the basket; he made it look so easy. After he had finished, I called "nose cold," and received clearance for precontact.

As I approached the tanker, I thought how stable the basket looked. I was cleared in and that's when the fun began. Even though the basket wasn't moving, I had a hard time staying engaged. The harder I tried, the worse things got. I misjudged my closure and took a long time to plug. The first time I made contact with the basket, I lipped it.

I envisioned myself coming aboard the carrier with a basket and hose trailing off my probe.

As I entered the basket, the probe was about halfway between the edge of the basket and the coupling in the center. I kept coming, expecting the drogue to center up for a good contact.

The hose started to bend, but the basket didn't center. Instead, it slipped off the probe and smacked the radome. I went to idle and mistakenly pulled on the stick to clear the basket. The chute disappeared around the lower right side of the nose and immediately followed by the aural caution tone's "deedle-deedle." After I cleared the chute, I looked at my displays. There were no caution lights.

After I landed, the postflight inspection revealed the left angle-of-attack vane was bent. Luckily, the fix was quick, and I learned a cheap lesson. To this day, I don't engage until it looks right, and I never pull up when disengaging.

Four months after this fiasco, we had made it to the western Med. Plugging A-6s had become almost routine. Then, one day, I was scheduled for a mission with a KC-130. I briefed the specifics and launched Case I.

Again, everything looked great until I got behind the tanker. I stabilized and looked at the basket. Between the prop wash and clear air turbulence, the drogue must have been oscillating at least 10 feet; and from the condition of the basket, it was clear I wasn't the only one having trouble. Several of the wires in the chute were broken or missing. I figured it was safe or it wouldn't have been used for this mission.

I tried to engage several times, to no avail. Finally, I steadied up, waited for a lull in the movement of the basket, and went for the gusto. I was looking great, going right for the coupling, when it moved. I continued, and to my amazement, the probe went directly through the hole in the wires! I envisioned myself coming aboard the carrier with a basket and hose trailing off my probe. I eased out as slowly as I could, and luckily, the probe disengaged without entanglement. I'd learned another valuable lesson: Don't go into the basket if it is obviously damaged.

Lt. Sandberg is an F/A-18 pilot with VFA-137. He is the squadron NATOPS Officer.

Robert L. Lawson

B I N G O:

12	29		48	67
3			60	
	25		55	64
7	22		59	66
	18		47	75

By Ltjg. J.K. Burge

I LEARNED about the importance of bingo profiles during my RAG carrier qualifications. My pilot and I were embarked in the ship about 100 nm off the coast. We covered everything in the brief—bingo range, bearing and required fuel—and manned up. As a nugget crew, we felt the normal apprehension and excitement. Our hearts pounded and our breathing nagged each other as it broke through the VOX

It's Not a GAME

threshold. My pilot did his runup checks, asked if I was ready, and saluted the cat officer. Two seconds later, we were racing toward the bow.

Halfway down the cat, I noticed the plane skid sideways. A quick check of the instruments proved there was plenty of airspeed and that we could maintain a positive climb. The Boss's voice came through the radio.

"802, do not raise your gear. You blew both main mounts on takeoff. Climb straight ahead, and go to button 17 for instructions." A series of choice words from my pilot revealed he had left his feet on the brakes. This was my first real emergency in the A-6 and my mind reeled as I tried to think of all the things we needed to do. I switched to button 17.

The firm, confident voice of our rep in air ops assured us that everything would work out. He told us to start our bingo profile and inspect the flaps and slats as best we could. If there was no damage, we should raise the flaps and slats, but leave the gear down. That advice was not what the PCL said but after all, this was our FRS instructor who was telling us what to do.

We started to climb on profile and began talking to the bingo airfield to allow plenty of time for an LSO to get ready, and for the field to rig the arresting gear. As we approached the right altitude we realized we had been climbing at normal climb speed. We checked the PCL and found that the correct climb speed for the bingo profile was 70 knots slower than a normal climb speed. Although we were not fuel-critical, we didn't want to waste our gas, either.

We continued inbound for a perfect engagement on the short-field arresting gear and stopped in a pool of hydraulic fluid. After climbing out of that plane, we hopped into another, finished our required day traps, and then prepared for the night portion.

Like before, we did a full brief, including releasing the brakes on the cat shot. Once airborne, we headed to the marshal stack for some night comfort time. After 20 minutes, we pushed for our touch-and-goes and four traps.

Our pass for the touch-and-go was pretty good but things went downhill from there. After a waveoff, two bolters and another waveoff, we found ourselves on our second bingo profile of the day. This time, we used the correct airspeed because we were low on fuel.

As we approached the coast, we encountered some difficulty with center. They tried to vector us to an MCAS but we convinced them we didn't have the gas, and went to an NAS. After that, we listened to the ATIS and found the field below mins. We dialed another local NAS ATIS and found their weather was workable but deteriorating. I did an airfield brief while my pilot talked to approach. Once again, the distractions got the better of us. We suddenly realized that we had flown past the idle descent point. Getting down now was going to take us longer than we wanted, and our fuel supply was uncomfortably low at 2,500 pounds.

Approach cleared the airspace for a spiral descent. With poor visibility and a lack of knowledge of the area, we could not find the field. My pilot asked for brighter approach lights and out of the fog came an intensely-bright landing area. For a moment, I thought we were landing the space shuttle. We landed with just under 2,000 pounds.

If we had briefed the entire profile, we would have been aware of the correct climb speed and let-down distance. Also, the notes say that with takeoff flaps, we needed 25 percent more fuel than with the flaps up. With this knowledge, we would have been less likely to climb at the wrong speed, fly past our descent point and wonder why we were told to raise the flaps in apparent violation of NATOPS.

My current habit pattern is to go over the entire bingo profile, climb speed, optimum altitude, and descent point, as well as pigeons, fuel required and reading the notes on the bingo page of the brief. In marshal, I rebrief that information. It may be too late when you receive the signal "bingo." ◄

Ltjg. Burge is an A-6 BN with VA-145. He is the squadron's Phase/Corrosion Branch Officer.

When Is a Bingo Not a Bingo?

By Lt. Paul M. Kolling

My nugget pilot and I were scheduled to fly to the boat. It would be his first fleet CQ period, consisting of an afternoon launch and a couple of traps before returning to homeplate. My pilot was only two weeks out of the RAG, and we would be flying on Charlie Oscar's wing. Taxi, launch and overhead marshal proceeded as briefed.

We approached the ship. At 3 nm astern, I noticed that we had 6.5 in the main bag and 2.0 in the wings. We had too much fuel for a safe trap.

Now it was time to speak up, and I advised the boss that we needed another five minutes to transfer trapped fuel. As I looked at my PCL, the pilot began flipping switches. Trying override, cycling the dumps, using buddy store and checking various power settings didn't help.

Before we really knew what happened, we had dumped down to under 5.0 in the main bag. If the trapped wing fuel was promptly transferred, we could still make CQ. With a 100-nm bingo and our current fuel flow, we had only 10 minutes until we would have to bingo.

While my pilot tried everything he could think of, I told the "tower flower" about our predicament. Our main bag was creeping toward our calculated bingo. I told the rep our fuel state and our intention to divert before reaching bingo. The tower told us to divert. We were relieved that the flail-ex was over, and we were heading for homeplate.

During the climb-out, my pilot asked me what altitude we should climb to. Nonchalantly I replied, "Oh, about 20,000 feet to 25,000 feet." Then thinking aloud, I said, "Why not make that 30,000 feet." The pilot never questioned my response and must have been impressed by my grace under pressure.

I looked up the correct bingo profile. We weren't close to flying the profile, but we found our mistake in time.

After climb-out, our wings started to transfer the 2.0 into the main bag. Approach soon told us to begin descent, but I couldn't see any reason to start a descent by the book since our wings had transferred the trapped fuel.

We started our pushover at 10 nm past the bingo descent point when I remembered what my practice bingo from the RAG was like. On our descent we needed a 7,000-plus fpm rate-of-descent so approach could hook us in for an eight-mile GCA final. But we didn't have enough airspace to make it without performing a Stuka dive. We ended up with a 16-mile final.

Fortunately, the weather and the wing-fuel transfer had cooperated. We rolled out with 3.0 in the main bag and some rules to live by tucked into our bag of tricks. One of them was not to ignore the bingo profile. If you do, that's when a bingo is not a bingo.

Lt. Kolling is NATOPS Officer for VA-185, deployed in USS *Midway* (CV-41).

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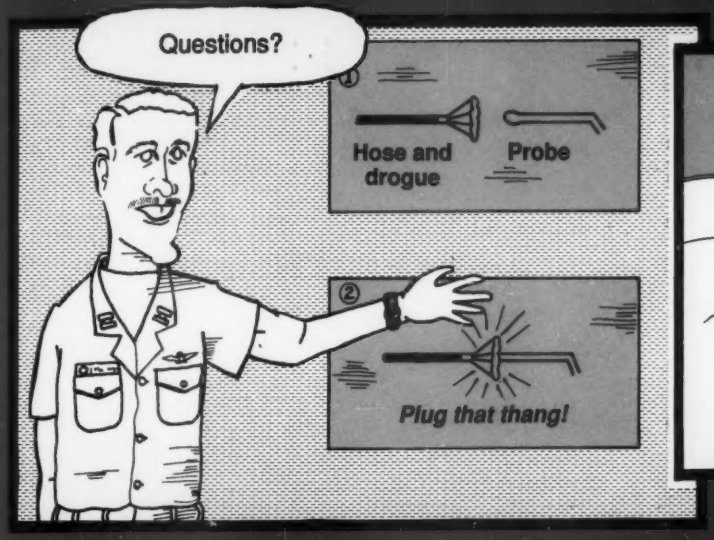

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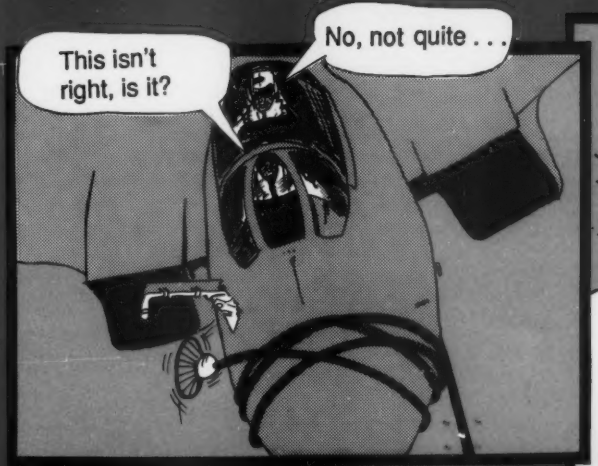
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